

EXHIBIT A

** E-filed on 4/22/05 **

NOT FOR CITATION
IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

DOLBY LABORATORIES, INC., et al.,

Plaintiffs,

v.

LUCENT TECHNOLOGIES INC.,

Defendant.

AND RELATED COUNTERCLAIMS

Case Number C 01-20709 JF (RS)

ORDER GRANTING (1) DOLBY'S
MOTION FOR SUMMARY
JUDGMENT OF NON-
INFRINGEMENT OF U.S. PATENT
NO. 5,341,457 AND (2) DOLBY'S
MOTION FOR SUMMARY
JUDGMENT OF NON-
INFRINGEMENT OF U.S. PATENT
NO. 5,627,938

[Docket Nos. 511 and 512]

Plaintiffs/Counter-Defendants Dolby Laboratories, Inc., and Dolby Laboratories Licensing Corporation (collectively "Dolby") move for summary judgment of non-infringement of United States Patent No. 5,341,457 ("the '457 patent") and United States Patent No. 5,627,938 ("the '938 patent"). Defendant/Counterclaimant Lucent Technologies Inc. and Counterclaimant Lucent Technologies Guardian I LLC (collectively "Lucent") oppose the motions. The Court has read the moving and responding papers and has considered the oral arguments of counsel presented on March 29, 2005. For the reasons set forth below, Dolby's motions for summary

judgment of non-infringement of the '457 and '938 patents will be granted.¹

I. BACKGROUND

The factual background of the instant action is set forth in the Court's Order Construing Claims of United States Patents No. 5,341,457 and No. 5,627,938, dated November 18, 2003, which is incorporated by reference herein. Because the claim-construction Order necessarily did not describe or refer to Dolby's accused technology, *see, e.g., Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003), the relevant facts with respect to the accused technology are discussed in the context of the infringement analysis below.

II. LEGAL STANDARDS

A. Standard for Summary Judgment

A motion for summary judgment should be granted if there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). Material facts are those that might affect the outcome of the case under the governing law. *Anderson*, 477 U.S. at 248. There is a genuine dispute about a material fact if there is sufficient evidence for a reasonable jury to return a verdict for the nonmoving party. *Id.* The moving party bears the initial burden of informing the Court of the basis for the motion and identifying portions of the pleadings, depositions, answers to interrogatories, admissions, or affidavits that demonstrate the absence of a triable issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). Where the party moving for summary judgment would not bear the ultimate burden of persuasion at trial, it

¹ The parties have briefed the following additional motions: Dolby's motions for summary judgment (1) of invalidity of the '457 and '938 patents, (2) of no inducement of infringement and no contributory infringement of the '457 and '938 patents, (3) of non-infringement of the '457 and '938 patents regarding Dolby's cinema technology, and (4) on Dolby's affirmative defenses of laches and equitable estoppel; Lucent's motion for summary judgment on Dolby's affirmative defenses; and Dolby's motion in limine to preclude Lucent from offering any expert report or testimony. Based on the parties' representations at the hearing, Dolby's motion for summary judgment of non-infringement of the '457 and '938 patents regarding Dolby's cinema technology appears to be moot. The Court will issue written orders with respect to the remaining motions in due course.

1 must either produce evidence negating an essential element of the nonmoving party's claim or
 2 defense or show that the nonmoving party does not have enough evidence of an essential element
 3 to carry its ultimate burden of persuasion at trial. *Nissan Fire & Marine Ins. Co. v. Fritz Cos.*,
 4 210 F.3d 1099, 1102 (9th Cir. 2000).

5 If the moving party meets its initial burden, the burden shifts to the nonmoving party to
 6 present specific facts showing that there is a genuine issue of material fact for trial. Fed. R. Civ.
 7 P. 56(e); *Celotex*, 477 U.S. at 324. The nonmoving party may not rely on the mere allegations or
 8 denials in its pleading in order to preclude summary judgment. Fed. R. Civ. P. 56(e); *Anderson*,
 9 477 U.S. at 248. The evidence and all reasonable inferences therefrom must be viewed in the
 10 light most favorable to the nonmoving party. *T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors*
 11 *Ass'n*, 809 F.2d 626, 630-31 (9th Cir. 1987). Summary judgment thus is not appropriate if the
 12 nonmoving party presents evidence from which a reasonable jury could resolve the material issue
 13 in its favor. *Anderson*, 477 U.S. at 248-49; *Barlow v. Ground*, 943 F.2d 1132, 1134-36 (9th Cir.
 14 1991).

15 **B. Standard for Patent Infringement**

16 Determination of patent infringement is a two-step process. *Lockheed Martin*, 324 F.3d at
 17 1318. First, the Court construes the patent claims to determine their proper scope.² *Id.*; *Markman*
 18 *v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). Second, the properly construed claims are
 19 compared to the allegedly infringing device. *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d
 20 1448, 1454 (Fed. Cir. 1998). While claim construction is a matter of law, determination of
 21 infringement is a question of fact. *Lockheed Martin*, 324 F.3d at 1318.

22 To prove infringement, the patentee must show that the accused device meets each claim
 23 limitation either literally or under the doctrine of equivalents. *Catalina Mktg. Int'l, Inc. v.*
 24 *Coolsavings.com, Inc.*, 289 F.3d 801, 812 (Fed. Cir. 2002). Literal infringement requires that the
 25

26
 27 ² The Court construed the claims of the '457 and '938 patents in its Order of November
 18, 2003, and clarified certain constructions in its Order of April 20, 2004.

1 accused device contain each limitation of the asserted claim. *Id.* Infringement under the doctrine
2 of equivalents requires that the accused device contain “an equivalent for each limitation not
3 literally satisfied.” *Id.* An element in the accused product is equivalent to a claim limitation if the
4 differences between the two are “‘insubstantial’ to one of ordinary skill in the art.” *Id.* (quoting
5 *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997)). One way to
6 determine insubstantiality is to ask “whether the accused device ‘performs substantially the same
7 function in substantially the same way to obtain the same result’ as the claim limitation.” *Id.* at
8 813 (quoting *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950)).
9 Whatever formulation is used, equivalence must be determined on an element-by-element basis,
10 not as to the invention as a whole, and application of the doctrine of equivalents must not be
11 “allowed such broad play as to effectively eliminate [an individual] element in its entirety.”
12 *Warner-Jenkinson*, 520 U.S. at 29, 40.

13 Whether an accused product infringes a patent literally and/or under the doctrine of
14 equivalents is a question that may be decided on summary judgment. *Bai v. L & L Wings, Inc.*,
15 160 F.3d 1350, 1353 (Fed. Cir. 1998). Summary judgment of no literal infringement is proper
16 when, construing the facts in a manner most favorable to the nonmoving party, no reasonable
17 jury could find that the accused product meets every limitation of the properly construed claims.
18 *Catalina Mktg.*, 289 F.3d at 812 (citing *Bai*, 160 F.3d at 1353). Similarly, summary judgment of
19 no infringement under the doctrine of equivalents is proper when no reasonable jury could
20 determine two elements to be equivalent. *Bai*, 160 F.3d at 1353-54. In other words, “[s]ummary
21 judgment of noninfringement is appropriate where the patent owner’s proof is deficient in
22 meeting an essential part of the legal standard for infringement, since such failure will render all
23 other facts immaterial.” *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1323
24 (Fed. Cir. 2001).

III. DISCUSSION³

A. The '457 Patent

Dolby moves for summary judgment that its AC-3 technology does not infringe the '457 patent either literally or under the doctrine of equivalents. Lucent opposes the motion, arguing that a reasonable fact-finder could conclude that Dolby's AC-3 technology, as used in both Dolby's and its licensees' products, meets every limitation of the asserted claims—claims 1 through 3 and 5 through 17—of the '457 patent. The Court concludes that summary judgment of non-infringement is appropriate, as Dolby has met its initial burden of showing the deficiency of Lucent's proof that Dolby's AC-3 technology generates a "tonality value" or its equivalent, and Lucent has not presented evidence from which a reasonable fact-finder could find that Dolby's AC-3 technology infringes the '457 patent.

Generation of a "tonality value" is an element of every asserted claim of the '457 patent. The Court has construed the term "tonality value" to mean a "value that reflects the tone-like or noise-like quality of an audio signal and which varies with time." Lucent asserts that, in Dolby's AC-3 technology, the exponent strategy⁴ is a "tonality value," and it maintains that Dolby's expert and engineers support this conclusion. Dolby's expert, Dr. Karlheinz Brandenburg ("Brandenburg"), explains in his report that there are two known measures of tonality: (1) the spectral flatness measure, which was known at the time the application for the '457 patent was filed, and (2) a polynomial predictor, which was developed later by Brandenburg himself and James Johnston ("Johnston").⁵ *See* Fisher Combined Decl., Ex. P at 3. Brandenburg concludes

³ The following discussion is not meant to be a comprehensive analysis of all of the issues raised by the parties regarding Dolby's motions for summary judgment of non-infringement of the '457 and '938 patents. Rather, it is intended to provide the parties with some explanation of the Court's reasons for granting the instant motions and for determining that no trial will be necessary on the matter of infringement.

⁴ The three exponent strategies that may be used in an AC-3 encoder are called "D15," "D25," and "D45." *See* Mot. for Summ. J. at 16; Opp'n at 7-8.

⁵ Johnston also was an inventor of the '457 patent.

1 that Dolby's AC-3 technology does not use either of these measures of tonality, stating that he
2 "[has] not found *any* features of AC-3 that generate or use a 'tonality value' as construed by the
3 Court." *Id.* (emphasis added). His opinion is based upon his review of, among other things, the
4 '457 patent and its prosecution history, the deposition testimony of the co-inventors of the '457
5 patent, the deposition testimony of Lucent's claim-construction expert, Dr. Nikil Jayant
6 ("Jayant"), the deposition testimony of Dolby's engineers, Dolby's AC-3 Professional Encoder C
7 Source Code, the Court's two Orders construing the asserted claims, and Lucent's infringement
8 contentions.⁶ *See id.* at 1-2.

9 Despite Brandenburg's explicit conclusion that Dolby's AC-3 technology does not use
10 any known measure of tonality, Lucent argues that the exponent strategy of Dolby's AC-3
11 technology incorporates the concepts from both of the measures of tonality identified by
12 Brandenburg. First, with respect to the spectral flatness measure, Lucent asserts that Dolby's
13 engineers have "explained the selection of the exponent strategy in terms of the spectral flatness
14 properties of the audio signal." Opp'n at 8. However, none of the evidence cited by Lucent
15 establishes that Dolby's AC-3 technology *actually uses* a spectral flatness measure. At most,
16 Lucent's evidence seems to establish that references to spectral flatness and tonality were made
17 in a section of a document setting the standard for AC-3 technology that never has been
18 implemented by Dolby.⁷

19 For example, the deposition testimony of Dolby Engineer Louis Fielder ("Fielder") that,
20 given the need to reduce the bit rate, a D45 exponent strategy is "better" than a D15 strategy for a
21 "relatively flat spectrum" and a D15 strategy is "better" than a D45 strategy for "a spectrum that
22

23 ⁶ In his report, Brandenburg observed that Lucent's infringement contentions are "vague
24 and do not allow [him] to understand clearly [their] basis." *Id.* at 2.

25 ⁷ Lucent also fails to satisfy its burden to defeat Dolby's motion by citing an article by
26 Dolby Engineer Craig Todd ("Todd"), et al., about Dolby's AC-3 technology, *see* Fisher
27 Combined Decl., Ex. II ("Todd article"), that Todd has described as "more of a marketing piece
28 than an accurate technical piece," Fisher Combined Decl., Ex. TT at 47, rather than by citing the
accused product directly.

1 consists of a sine wave,” which he identified as a “tonal” spectrum, immediately followed an
2 instruction from Lucent’s counsel that Fielder, in answering, should “focus on *not* whether this is
3 *actually done* and explicitly tested in the AC-3 model, but whether the sentences are reasonable
4 for the different strategies.” Kellman Decl., Ex. R at 77-80 (emphasis added). The sentences that
5 were the subject of the questioning came from the Advanced Television Systems Committee
6 standard on AC-3 technology (“the A/52A Standard”), *see* Fisher Combined Decl., Ex. Q, which
7 is not the accused product in this case, *see* Mot. for Summ. J. at 5; Fisher Combined Decl., Ex.
8 CC at 59, and which contains purely informative information on the encoding process, with the
9 only exception being the normative requirement that the “output elementary bit stream follow
10 AC-3 syntax,”⁸ Fisher Combined Decl., Ex. Q, § 8.1. Indeed, earlier in the deposition, Fielder
11 *disagreed* that the sentences from the A/52A Standard referenced above reflect how Dolby’s AC-
12 3 technology *actually functions*, and he stated that Dolby never has “used spectral flatness as a
13 measurement to determine the exponent strategy.”⁹ Kellman Decl., Ex. R at 70-75.

14 Similarly, while Dolby Engineer Craig Todd (“Todd”) appears to have agreed in his
15 deposition testimony that the sentences from the A/52A Standard referenced above are true in the
16 abstract, he also has testified that Dolby did not *actually implement* what is described in them.
17 *See* Kellman Decl., Ex. U at 89-96. Moreover, Dolby’s vice president of licensing technology,
18 Steve Vernon (“Vernon”), who previously worked for Dolby as an engineer and whose
19 deposition testimony is cited by Lucent in an unpersuasive attempt to link the “concept of
20 spectral flatness to changes in the audio signal over time,”¹⁰ Opp’n at 9; *see also* Kellman Decl.,

21 _____
22 ⁸ The normative portions of the A/52A Standard specify “a coded representation of audio
23 information” and the decoding process. Fisher Combined Decl., Ex. Q, § 2.

24 ⁹ Dolby presents evidence from Fielder’s deposition further undermining Lucent’s
25 position, where he testified that the selection of the exponent strategy is not “a measure of how
26 tonal the signal is . . . [b]ecause the way it’s selected is based on the time sequence of energy
27 levels.” Fisher Combined Decl., Ex. UU at 190.

28 ¹⁰ Lucent similarly fails to show how the Todd article, *see* Fisher Combined Decl., Ex. II,
“ties the concept of spectral flatness to changes in the audio signal over time,” Opp’n at 9. In

1 Ex. V (Substituted) at 71-72; Reply at 10; Fisher Combined Decl., Ex. RR at 54, has testified that
2 spectral flatness is *not* used in Dolby's AC-3 technology "at all," Kellman Decl., Ex. V
3 (Substituted) at 72.¹¹ Such evidence is insufficient to defeat Dolby's motion for summary
4 judgment of non-infringement.

5 Lucent also asserts, contrary to Brandenburg's expert opinion, that the exponent strategy
6 of Dolby's AC-3 technology incorporates the concept from the measure of tonality known as a
7 polynomial predictor. According to Lucent, a polynomial predictor "measures the coherence of
8 the audio signal across several time blocks," "[t]his coherence or predictability measure looks at
9 the change in the signal components (or frequency coefficients) over several time blocks," and
10 "[i]f the signal changes dramatically over time and has little coherence it is considered noise-like,
11 while a relatively predictable signal that does not change much is considered tone-like." Opp'n at
12 7. Although Lucent cites to several documents that purportedly support these
13 statements—Brandenburg's expert report, United States Patent No. 5,040,217, which claims the
14 polynomial predictor, and an AT&T technical memorandum by Brandenburg and Johnston from
15 February 1991 regarding their hybrid coder—none of them clearly draws a link, in non-technical
16 language, between dramatic signal changes and noise-like quality on one hand and stability and
17 tone-like quality on the other hand. *See* Fisher Combined Decl., Ex. P at 3; Fisher Combined
18 Decl., Ex. R at 2-3; Kellman Decl., Ex. S at 5-6.

19 Thus, even though Lucent has presented evidence from the depositions of two of Dolby's
20 engineers, Fielder and Todd, that the exponent strategy in Dolby's AC-3 technology is a measure
21 of how the exponents and the energy level of the time sequence of audio signals vary over time,
22 that the D45 strategy is used when there is a lot of variation or instability in the signal over time,
23

24 fact, Todd has testified that he cannot "generalize and conclude" that "unstable signals tend to
25 produce relatively flat spectra." *See* Fisher Combined Decl., Ex. TT at 35.

26 ¹¹ Many of Dolby's citations to page and line numbers of its own exhibits are incorrect,
27 and, on more than one occasion, as here, the Court was unable to locate referenced material in
28 the deposition transcript excerpts provided by Dolby.

1 and that the D15 strategy is used when the signal is relatively stable and varies little over time,
2 *see* Kellman Decl., Ex. R at 81-83; Kellman Decl., Ex. U at 30-33, Lucent has not demonstrated
3 the link between variation or stability of an audio signal and tonality that is crucial to support its
4 assertion that Dolby's AC-3 technology generates or uses a "tonality value." Furthermore, Dolby
5 has presented evidence from the depositions of Todd, Vernon, Fielder, and Lucent's claim-
6 construction expert, Dr. Jayant, demonstrating that a perfect tone (i.e., a sine wave) need not
7 remain stable but can change over time and that noise can remain steady and need not change at
8 all, which contradicts Lucent's theory of the relationship between signal stability and tonality as
9 relevant to its charge of infringement. *See* Fisher Combined Decl., Ex. TT at 148; Fisher Supp.
10 Combined Decl., Ex. KKKKK at 60-61; Kellman Decl., Ex. V (Substituted) at 50-51; Kellman
11 Decl., Ex. R at 190-91; Fisher Combined Decl., Ex. PP at 127-28.

12 In addition to seeking summary judgment that its AC-3 technology does not literally
13 infringe the '457 patent, Dolby moves for summary judgment of non-infringement under the
14 doctrine of equivalents. In opposing Dolby's motion, Lucent does not explicitly advance any
15 argument or present any evidence of infringement under the doctrine of equivalents with respect
16 to the "tonality value" element. Moreover, reviewing the evidence asserted by the parties
17 regarding the question of literal infringement, the Court concludes that a reasonable fact-finder
18 could not find that the exponent strategy in Dolby's AC-3 technology is equivalent to a "tonality
19 value."

20 Accordingly, Dolby's motion for summary judgment that its AC-3 technology does not
21 infringe the '457 patent either literally or under the doctrine of equivalents will be granted.

22 **B. The '938 Patent**

23 Dolby moves for summary judgment that its AC-3 technology does not infringe the '938
24 patent either literally or under the doctrine of equivalents. Lucent opposes the motion, arguing
25 that a reasonable fact-finder could conclude that Dolby's AC-3 technology, as used in both
26 Dolby's and its licensees' products, meets every limitation of the asserted claims—claims 1
27 through 4—of the '938 patent. The Court concludes that summary judgment of non-infringement

1 is appropriate, as Dolby has met its initial burden of showing the deficiency of Lucent's proof
2 that Dolby's AC-technology uses an "absolute hearing threshold" or its equivalent, and Lucent
3 has not presented evidence from which a reasonable fact-finder could find that Dolby's AC-3
4 technology infringes the '938 patent.

5 Use of an "absolute hearing threshold" is an element of every asserted claim of the '938
6 patent. The Court has construed the term "absolute hearing threshold" to mean "an estimate of
7 the level at which the quietest sounds can be perceived by the human auditory system." Lucent
8 asserts that, in Dolby's AC-3 technology, the "hth" curve is an "absolute hearing threshold." The
9 essence of Lucent's argument is that the "hth" curve is "simply the result of Dolby's attempt to
10 estimate the best absolute hearing threshold for the AC-3 algorithm" and that it is "a practical
11 estimate of the . . . level at which the quietest sounds can be perceived by the human auditory
12 system, i.e., an absolute hearing threshold." Opp'n at 8, 9. However, the deposition testimony of
13 two of Dolby's engineers, Fielder and Grant Davidson ("Davidson"), cited by Lucent establishes
14 that an "absolute hearing threshold" was only a component in the design, or derivation, of the
15 "hth" curve, not that the "hth" curve itself is an "absolute hearing threshold" as construed by the
16 Court. *See* Kellman Decl., Ex. R at 44-51; Kellman Decl., Ex. T at 69-70. Indeed, their testimony
17 shows that, although Dolby began its design of the "hth" curve with the International Standards
18 Organization ("ISO") estimate of the level at which the quietest sounds can be perceived by the
19 average human, the ISO estimate proved to be insufficient for Dolby's purposes and was
20 modified based on a number of different factors, including total harmonic distortion analysis; that
21 the "hth" curve that resulted from those modifications has a different purpose than an "absolute
22 hearing threshold" does; and that the "hth" curve in fact includes sounds that are assumed *not* to
23 be heard by humans. *See* Kellman Decl., Ex. R at 44-51; Kellman Decl., Ex. T at 69-70, 73-79,
24 81-82.

25 Although Lucent dismisses the report of Dolby's expert, Dr. Brandenburg, as
26 "conclusory," "incorrect," and at odds with the "unambiguous testimony of Dolby's witnesses,"
27 Opp'n at 9, the report actually is consistent with and refers to Fielder's and Davidson's

deposition testimony, *see* Fisher Combined Decl., Ex. P at 4-5. Brandenburg concludes that, instead of using an “absolute hearing threshold” as construed by the Court, Dolby’s AC-3 technology “uses an engineer-derived curve as a threshold that differs from an estimated threshold of human hearing in a variety of ways to achieve improved distortion results, among other things.” *Id.* He goes on to say that the curve “is *not* an estimate of the level at which the quietest sounds can be perceived by the human auditory system” and that “the values used by Dolby’s AC-3 technology in its curve are substantially different, and the curve itself performs different functions, and behaves in a different manner, from the claimed ‘absolute hearing threshold.’” *Id.* at 5 (emphasis added). His opinion is based upon his review of, among other things, the ’938 patent and its prosecution history, the deposition testimony of the inventor of the ’938 patent, the deposition testimony of Dolby’s engineers, Dolby’s AC-3 Professional Encoder C Source Code, the Court’s two Orders construing the asserted claims, and Lucent’s infringement contentions. *See id.* at 1-2.

In addition to arguing that there is sufficient evidence for a reasonable fact-finder to find that Dolby’s AC-3 technology literally infringes the ’938 patent—an argument that fails for the reasons stated above—Lucent asserts in the alternative that the “hth” curve meets the limitation of use of an “absolute hearing threshold” under the doctrine of equivalents. However, the whole of Lucent’s argument is as follows:

HTH performs exactly the same function in the same way as the absolute hearing threshold in the ’938 patent—as a value that is compared to the masking threshold (AC-3’s excitation function) using a maximum function, before quantization. This leads to the same result as the ’938 patent: a composite threshold incorporating both the masking and absolute hearing thresholds.

Opp’n at 9-10 (citations omitted). In support of its argument, Lucent cites to five lines of the ’938 patent, one section of the A/52A Standard, and twelve lines of the deposition testimony of Steve Vernon, Dolby’s vice president of licensing technology, who previously worked for Dolby as an engineer, without explaining how this evidence supports its assertion of equivalence. *See id.* at 9. Particularly in light of Brandenburg’s expert opinion that the “hth” curve “performs different functions, and behaves in a different manner” than the claimed “absolute hearing threshold,”

1 Fisher Combined Decl., Ex. P at 5, Lucent's meager argument and purported evidence of
2 equivalence is insufficient to preclude summary judgment of non-infringement.

3 Accordingly, Dolby's motion for summary judgment that its AC-3 technology does not
4 infringe the '938 patent either literally or under the doctrine of equivalents will be granted.

5 **IV. ORDER**

6 Good cause therefore appearing, IT IS HEREBY ORDERED that Dolby's motions for
7 summary judgment of non-infringement of United States Patent No. 5,341,457 and United States
8 Patent No. 5,627,938 are GRANTED.

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12 DATED: April 22, 2005

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14 /s/ (electronic signature authorized)
15 JEREMY FOGEL
16 United States District Judge
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